

Work Order ID 69453

Wednesday, May 11, 2011 10:33:59 AM



Page 1

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: 

Date: 11-05-11

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

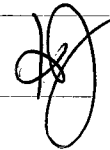
DC

0.00

Memo

Document Control

Photocopy bluefile & type labels per PPP D206-642-541 CHG003

N/A 

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QSI000

AR Aluminum Rod Batch: *m112860/m 117456*

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

DP 11-5-20

DL 11/05/30

BE 11/06/03

BE 11/06/03

BB

11/06/14

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

114

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Sulocaf

116

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

Sulocaf

120

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

*Q**B 6/6/14*

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

DP

11-8-10

150

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☒ MU2510

Sikaflex expire date: ☐ 12/01/15

Start: ☐ 11/08/10 Time: ☐ 3:30 PM

Finish: ☐ 11/08/10 Time: ☐ 7:30 PM

(Adhere for 12 hours)

Sh
11/08/10

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

1 0 BEN/08/15

170



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" . Deburr3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

BEN/08/15

BB 11/08/15

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

11-8-15

190



Skidtubes

Skidtubes

Skidtubes

0.00

Memo

0.00

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R ☐ Aluminum Rod M112860

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

BE 11/08/16
BE 11/08/16

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

5/10/11

Quality Control

210

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

5/10/11

Quality Control

20

220

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

IX Ø M / 4/08/16

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 0.00



Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

3:10
320 OF
3:40

12 of M-11/08/16

240 QC3- Inspect Part Finish 0.00



QC

Quality Control

Memo

1 of M-11/08/17

250 HandFinishing 0.00



HandFinish

Hand Finishing

Memo

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

A/R ☐ N/A ☐ LPS-3 ☐ M109956

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R ☐ ☐ Sikaflex-291 ☐ 1/1 11/25/16

Sikaflex expire date: ☐ 1/1/16

1 of M-11/08/17

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Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

260

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Inspect Nut Plate & Inserts

8 u/08/17

(40)

270

HAND FINISHING RESOURCE #1

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274
A/R ☐ Sikaflex-291 ☐ 11/7516
Sikaflex expire date: ☐ 15101

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3
A/R LPS-3 Batch: 01A

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.
A/R ☐ Sikaflex-291 ☐ 11/7516
Sikaflex expire date: ☐ 15101

1 6 10 u/08/17

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Customer:

Reference:

Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

290

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

300

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control



Sub 817

RPP 70365

④

11/8/11

11/8/11

PK 0819
①

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Page 1

Work Order ID: 69453

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube



Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190 		Manufactured	No			110	Each	34.4000	1	1			
Extrusion Round 3" 206													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				HALL				34.4					
				59874				34.4					
D3285-1 		Manufactured	No			110	Each	110.0000	1	1			
Cap													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG002				110					
				52511				63					
				52647				47					
D3282-041 		Manufactured	No			150	Each	9.0000	1	1			
Float Web (206L/407)													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				9					
				65293				2					
				66363				7					
				69715									

② DP 11-5-26
 BE 11/03
 11/08/10
 ①

W/O:		WORK ORDER CHANGES					
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Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 199.0000 12 12



Cross Bolt Spacer



BE 11/03/15
B72704 x 12

Location Loc Qty Loc Code

LG	85	
68224	85	
LG001	114	
65317	1	
68507	113	

D3275-1 Manufactured No 190 Each 262.0000 12 12



Crossbolt Spacer



BE 11/03/15
B70688 x 1

Location Loc Qty Loc Code

LG	71	
67767	71	
LG002	191	
66109	11	
66930	108	
68946	72	

CR3212-4-03 Purchased No 250 Each 1,254.000 2 2



Cherry Rivet



11
u u108/17

Location Loc Qty Loc Code

FP-B	16	
110139	16	
ST311	1238	
114859	1238	

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Shop Packet Print

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Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011



Required Date: 6/6/2011

Start Qty: 1.00



Required Qty: 1.00

D3415-041 Manufactured No 250 Each 68.0000 1 1
  u/08/17
 Nut Plate



Location	Loc Qty	Loc Code
ST053	68	
33842	24	X1
67605	44	

CCR264SS3-3 Purchased No 250 Each 139.0000 2 2
  u/08/17
 Cherry Rivet

Location	Loc Qty	Loc Code
FP-B	2	
113973	2	
ST311	137	
113973	2	X2
117086	135	

ALS4-1032-130 Purchased No 250 Each 1,000.000 78 78
  u/08/17
 Insert

Location	Loc Qty	Loc Code
ST281	1000	1118237
117331	1000	X78

D3536-15 Manufactured No 270 Each 25.0000 1 1
  u/08/17
 Gasket

Location	Loc Qty	Loc Code
FP011	25	
66559	25	X1

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NOTE: Date & initial all entries

Picklist Print

Wednesday, May 11, 2011 10:34:07 AM

Work Order ID: 69453

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011



Required Date: 6/6/2011

Start Qty: 1.00



Required Qty: 1.00

D3536-23 Manufactured No 270 Each 23.0000 1 1
  xl u102117
 Gasket



Location	Loc Qty	Loc Code
FP011	23	B69902
43406	1	
53468	1	
66560	21	

D3536-35 Manufactured No 270 Each 17.0000 1 1
  xl u102117
 Gasket

Location	Loc Qty	Loc Code
FP012	17	
66237	5	B69755
67599	12	

D3536-39 Manufactured No 270 Each 17.0000 1 1
  xl u102117
 Gasket

Location	Loc Qty	Loc Code
FP015	17	B69760
63578	5	
66241	12	

D3535-15 Manufactured No 270 Each 19.0000 1 1
  xl u102117
 Wearshoe

Location	Loc Qty	Loc Code
FP018	19	B69931
66558	12	
68358	7	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 11, 2011 10:34:07 AM

Page 5

Work Order ID: 69453

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011



Required Date: 6/6/2011

Start Qty: 1.00



Required Qty: 1.00

D3535-35 Manufactured No 270 Each 21.0000 1 1
  HL u/08/17
Wearshoe



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	21	1369756
65926	3	
67598	8	
68348	10	

D3535-39 Manufactured No 270 Each 12.0000 1 1
  HL u/08/17
Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	12	
64076	12	1369759

D3535-23 Manufactured No 270 Each 31.0000 1 1
  HL u/08/17
Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP021	31	
66236	5	1371581
67594	13	
68342	13	

D3537-3 Manufactured No 270 Each 13.0000 1 1
  HL u/08/17
Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP017	13	
35697	1	1370481
66230	12	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 11, 2011 10:34:07 AM

Page 6

Work Order ID: 69453

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D3537-1 Manufactured No

270 Each

56.0000

9

9



Wearpad



11/08/17

Location

Loc Qty

Loc Code

FP017

56

869530

49

63313

2

66135

2

66804

48

66935

4

AN960C10L NAS1149C0332 Purchased

No

270

Each

0.0000

80

80



washer

1118306



11/08/17

AN960C416 NAS1149C0463 Purchased

No

270

Each

0.0000

1

1



washer

1117735



11/08/17

D3672-1 Manufactured No

270

Each

1,371.000

2

2



Phenolic Washer



11/08/17

Location

Loc Qty

Loc Code

FP-A

21

52505

21

ST074

1350

64177

850

66821

500

42

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 11, 2011 10:34:08 AM

Page 7

Work Order ID: 69453

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A	Purchased	No	270	Each	1,662.000	80	80
							<u>24 1108117</u>
BOLT							

Location

Loc Qty

Loc Code

ST350

1662

M118012



480

117094

964

117313

698

AN4C5A	Purchased	No	270	Each	532.0000	1	1
							<u>24 1108117</u>
BOLT							

Location

Loc Qty

Loc Code

FP-B

116

112243

116



41

ST345

416

112243

416

D2646	Manufactured	No	270	Each	42.0000	1	1
							<u>24 1108117</u>
Aft Cap							

Location

Loc Qty

Loc Code

FP006

41

B68280

41

62678

41

FP-4

1

69019

1

Wednesday, May 11, 2011 10:34:08 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Wednesday, May 11, 2011 10:34:08 AM

Work Order ID: 69453



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D3413-1

Manufactured

No

270

Each

36.0000

1

1



Ring



M 10/21/11

Location

Loc Qty

Loc Code

ST420

19

62961

8

66387

11

ST473

17

65294

3

66945

14

x^n

KL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. **119453**
PH-05-11

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

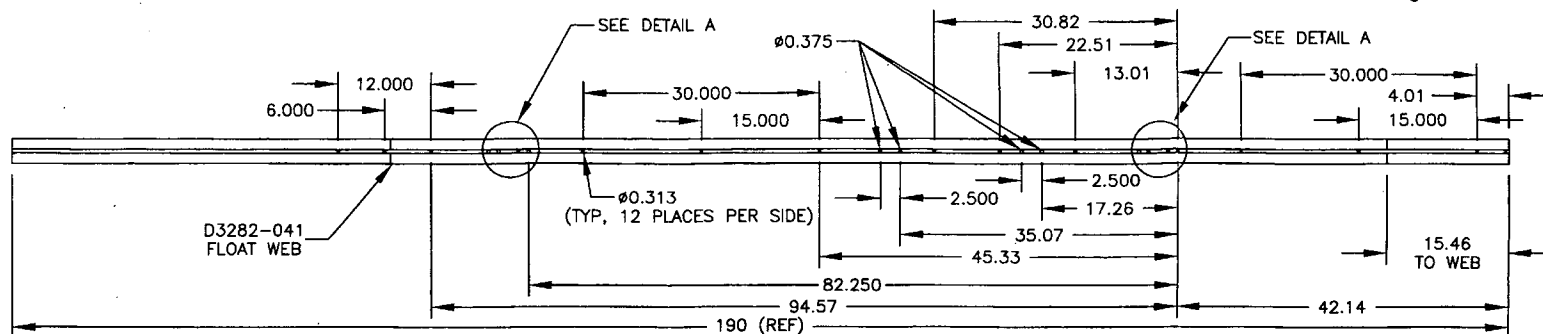
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

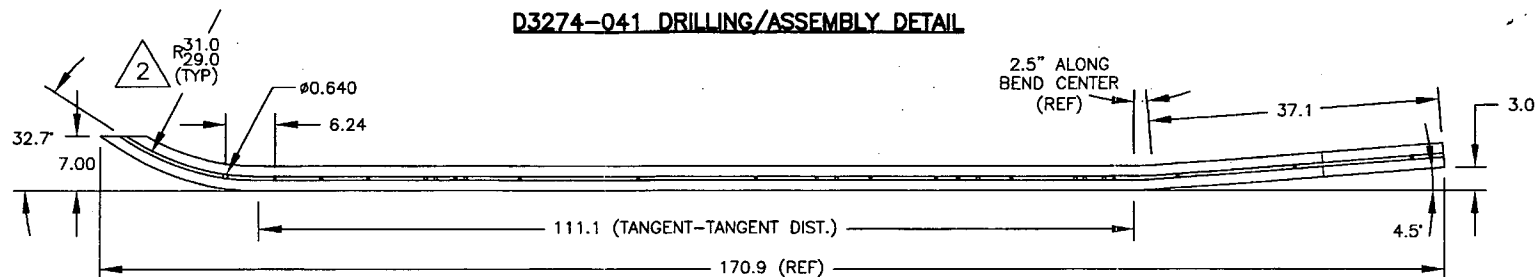
NOTE: Date & initial all entries

DEO ATTACHED

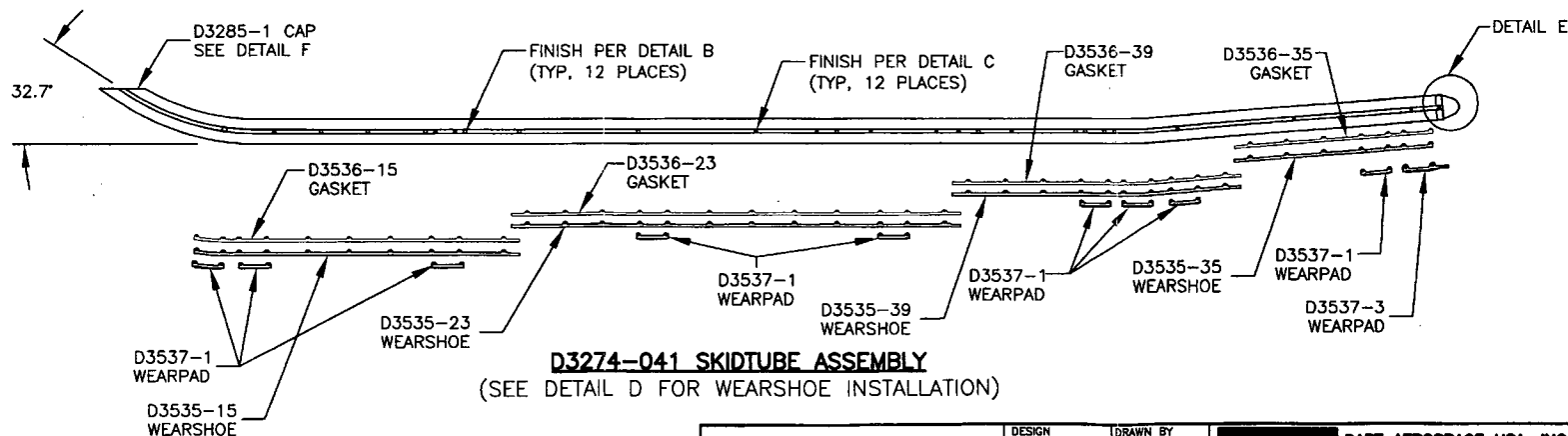
elb 19453



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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CHECKED	APPROVED	CP	PH	DRAWING NO.	REV. D
				D3274	SHEET 2 OF 4
DATE	TITLE			SCALE	
06.12.19	SKIDTUBE ASSEMBLY			1:15	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

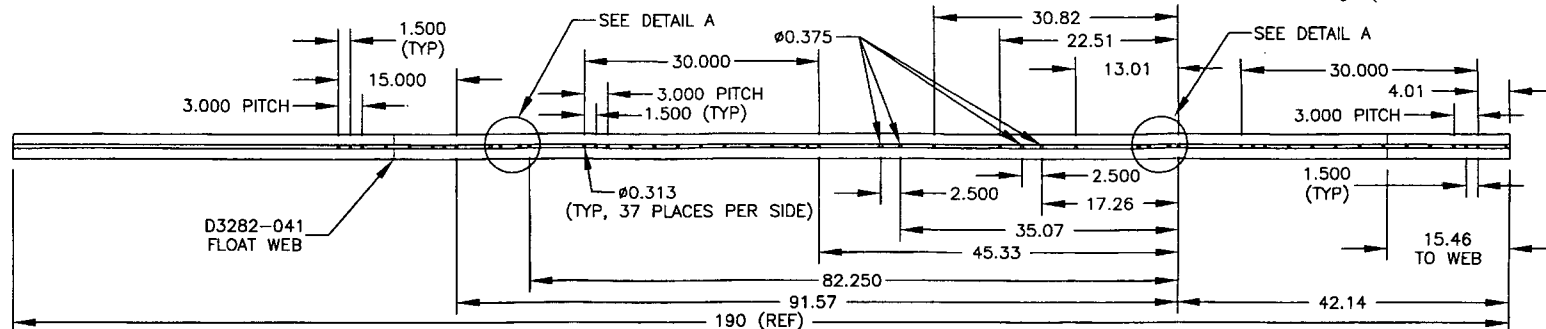
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

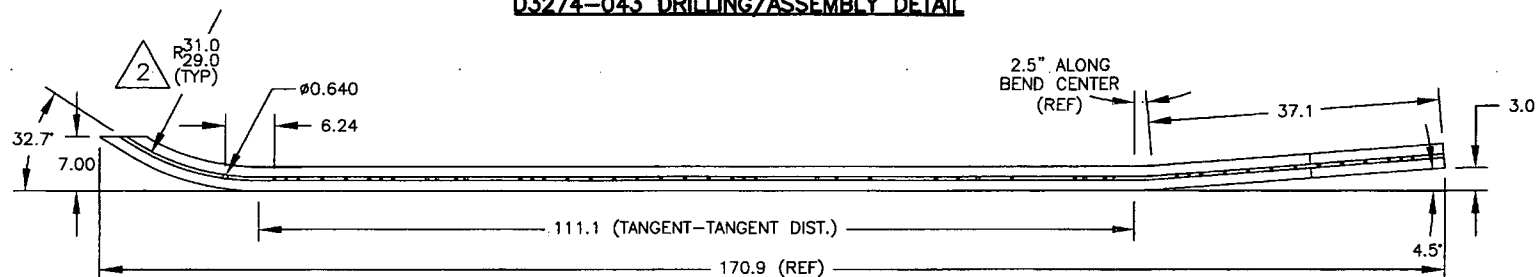
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

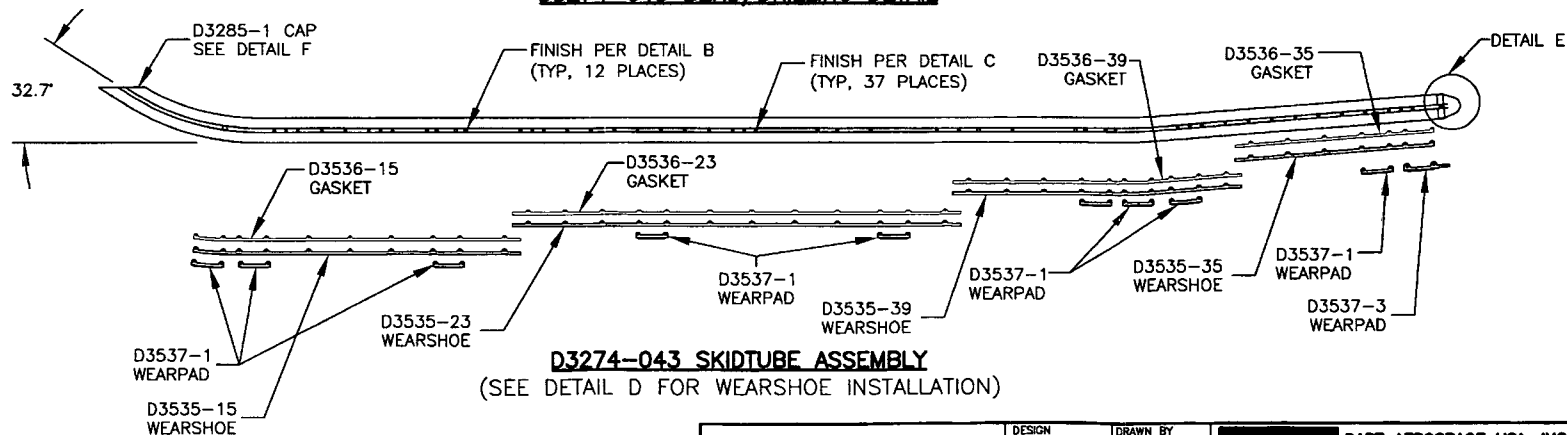
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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DESIGN	CP	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	H	APPROVED	H	DRAWING NO. D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D SHEET 3 OF 4 SCALE 1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

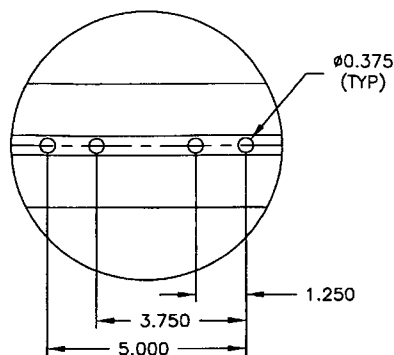
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

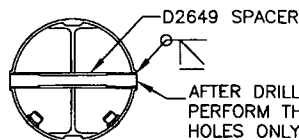
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

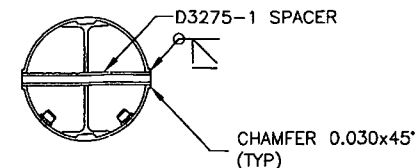


DETAIL B FOR 0.375 HOLES ONLY



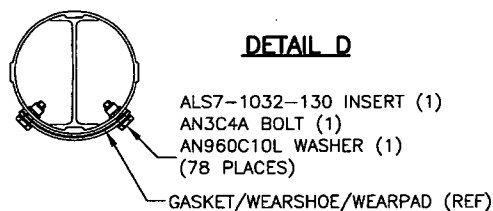
- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO 0.313x0.75 DEEP

DETAIL C FOR 0.313 HOLES ONLY

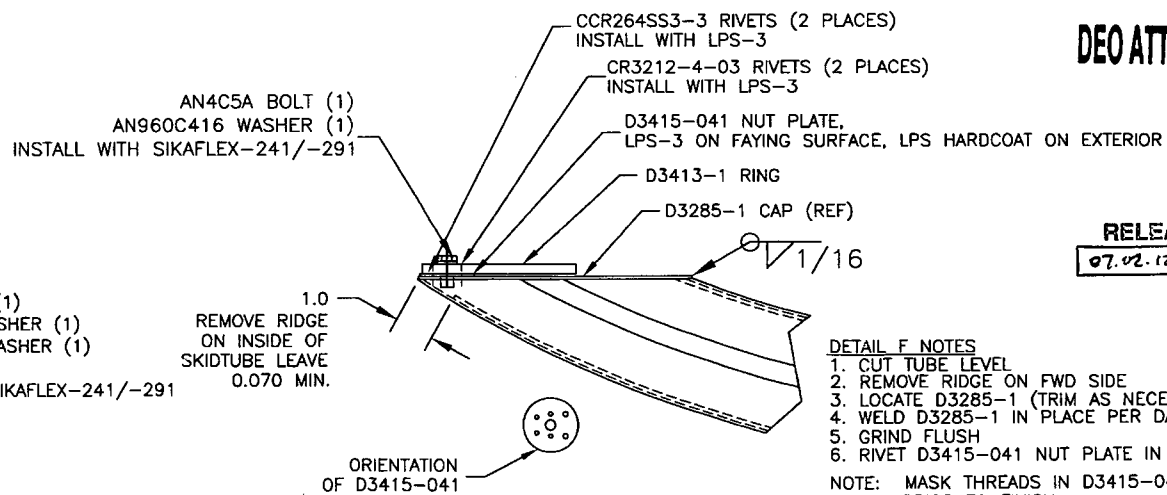


w/o 64453

DETAIL D



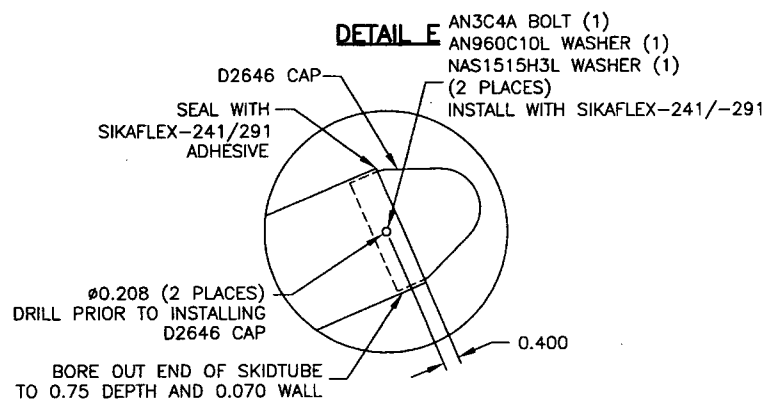
DETAIL F: END FINISHING DETAIL



DEO ATTACHED

RELEASED
07.02.12

DETAIL E



- DETAIL F NOTES**
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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		CHECKED	APPROVED	DATE	SCALE
		#	#	06.12.19	1:3
				TITLE	
				SKIDTUBE ASSEMBLY	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

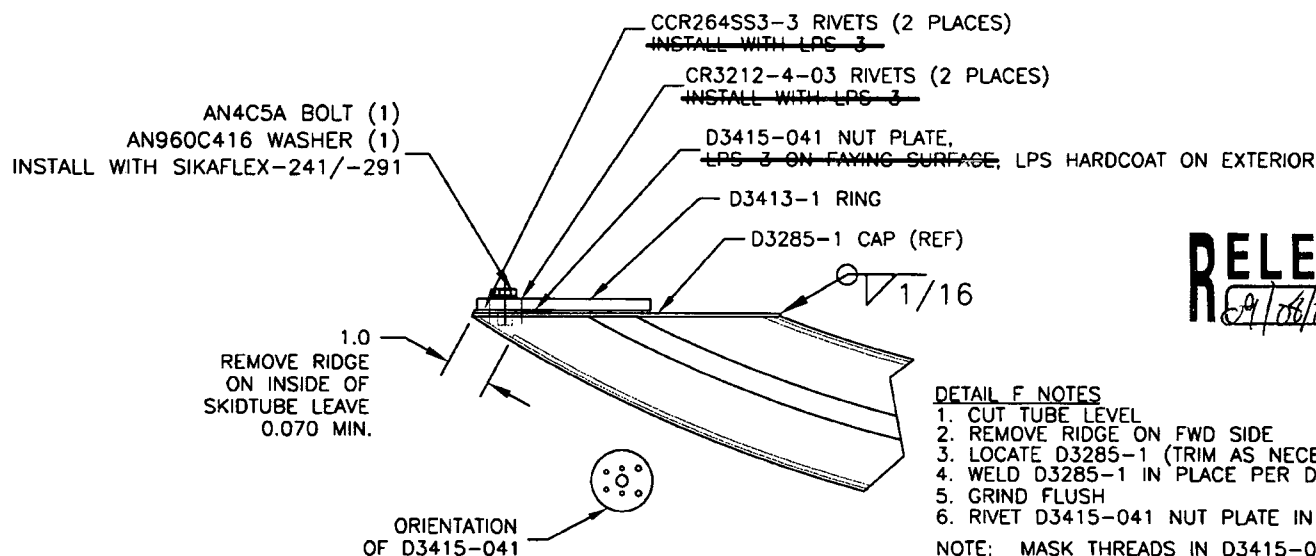
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



RELEASED
09/06/23

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 261

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: B69449
Part number: D206 642 541
Description: 206
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Sal Summ Date of Test Coupon 11-08-11

Welder Barclay Elliott Date of Test Coupon 11-08-11

The above named individual is qualified in accordance with AWS D17.1.2001 to weld